AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A system for inspecting an optical fiber comprising:

a camera system imaging an entire circumferential surface of the optical fiber by imaging partial portions of the entire circumferential surface and then recombining the partial portions into a complete image of the entire circumferential surface; and

an automated motion system which translates the optical fiber relative to the camera from a start point to an end point.

2. (Previously Presented) The system of claim 1, further comprising an autofocus unit for automatically adjusting a focus of the camera system each time the optical fiber is linearly translated.

3. (Currently Amended) The system of claim 1, wherein the camera system comprises two cameras, each camera imaging a different semicircle of the optical fiber.

4. (Original) The system of claim 1, wherein said camera system includes a top camera which captures a top semicircle of the fiber, a bottom camera which captures a bottom semicircle of the fiber, and a reflector which redirects an image of one of the top and bottom semicircle to a corresponding top and bottom camera.

5. (Original) The system of claim 1, wherein said automated motion system comprises a base frame holding the fiber and a linear motor attached to the base frame.

6. (Original) The system of claim 5, further comprising a base plate, the base frame being mounted on one side of the base plate, the linear motor being mounted on an opposite side of the base plate, and the base frame extending through the base plate.

7. (Previously Presented) The system of claim 6, further comprising a calibrated slot in the base plate through which the base frame extends, the calibrated slot establishing a start and finish position for the translation of the optical fiber.

8. (Previously Presented) The system of claim 5, wherein the base frame includes alignment pins for aligning the optical fiber with the base plate.

9. (Original) The system of claim 1, further comprising an encoder which checks operation of the automated motion system.

10. (Original) The system of claim 1, wherein the automated motion system comprises a magnetic coil linear motor.

11. (Previously Presented) A method for inspecting an optical fiber having a recoat thereon comprising:

imaging the optical fiber;

evaluating at least one image of the optical fiber for imperfections; and

calculating a stability index based on a thickness of the recoat on the fiber, a depth of any surface cracks on the recoat, and a depth of any bubbles in the recoat.

12. (Original) The method of claim 11, wherein said imaging includes automatically translating the fiber relative to a camera system.

13. (Original) The method of claim 12, wherein said automatically translating includes aligning a fiber with a frame attached to a motor.

14. (Original) The method of claim 12, wherein said automatically translating includes positioning the fiber at a homing position.

15. (Original) The method of claim 12, wherein said automatically translating includes comparing translations to translation of an encoder slide.

16. (Cancelled)

17. (Original) The method of claim 11, wherein said imaging of the fiber includes imaging a top surface and a bottom surface of the fiber simultaneously.

18. (Original) The method of claim 11, further comprising, when the recoat is determined to be unacceptable, directing the fiber back to be recoated again.

19. (Previously Presented) The system of claim 1, further comprising:

an image processor operatively connected to said camera system, said image processor evaluating the optical fiber images from said camera system for imperfections, and

calculating a stability index based on a thickness of the recoat on the fiber, a depth of any surface cracks on the recoat, and a depth of any bubbles in the recoat.

20. (Previously Presented) The method of claim 11, further comprising:

determining acceptability of the recoat of the optical fiber by comparing the stability index to an objective criteria.